



INDIANA DEPARTMENT OF LABOR

Confined Space Entry

Mark McDaniel, Safety Consultant

Purpose



OBJECTIVES:

- Definition
- Equipment
- Hazards
- Permits
- Training



Confined Space Defined:

- A **confined space** has limited or restricted means of entry or exit, is large enough for an employee to enter and perform assigned work, but is not designed for continuous occupancy by the employee. These spaces may include, but are not limited to, underground vaults, tanks, storage bins, pits and diked areas, vessels, and silos.



Confined Space Defined:

- "Permit-required confined space (permit space)" means a confined space that has one or more of the following characteristics:
 - (1) Contains or has a potential to contain a hazardous atmosphere;
 - (2) Contains a material that has the potential for engulfing an entrant;
 - (3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
 - (4) Contains any other recognized serious safety or health hazard.



Confined Space Defined:

- "Non-permit confined space" means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.



EQUIPMENT:

- Monitor
- Harness
- Tri-Pod
- First Aid
- Ventilation
- Communication



Equipment



Equipment



Equipment



Equipment



Equipment



Equipment



HAZARDS:

- Access
- Oxygen
- Toxic/Corrosive
- Enclosed
- Heat
- Lighting



Hazards



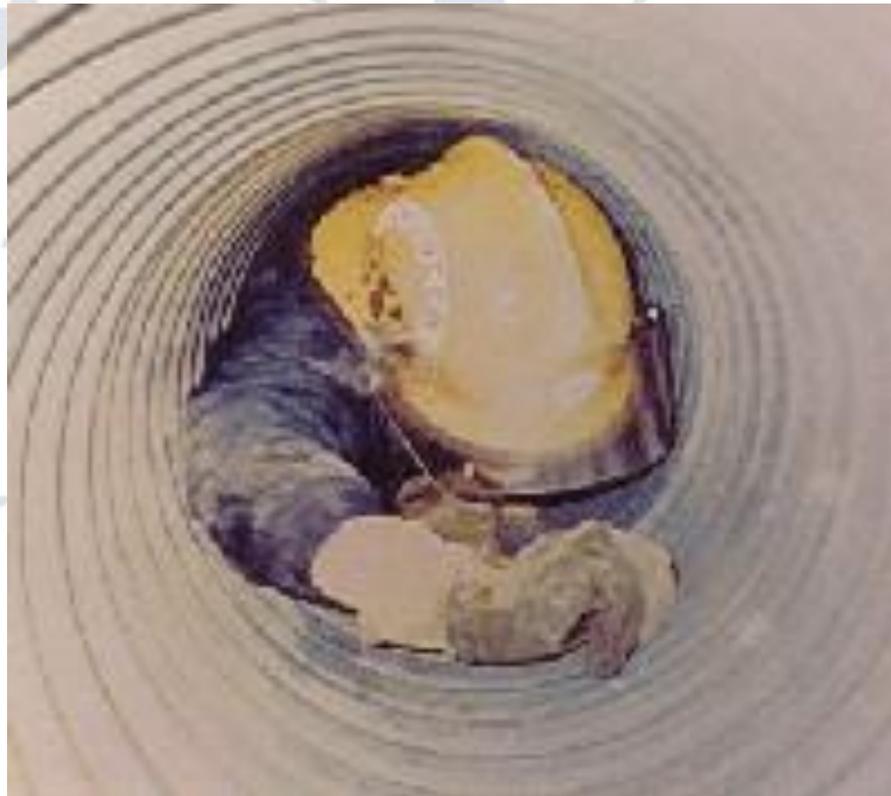
Hazards



Hazards



Hazards



Hazard



Hazards



PERMITS:

- Purpose of entry.
- Entry date and the time employees will enter.
- Authorized entrants' names.
- Authorized attendants' names.
- Entry supervisor's name and signature.



PERMITS:

- Hazards in the space.
- How hazards will be controlled so that the space is safe to enter.
- Acceptable entry conditions.
- Testing data and testers' initials that certify the space is safe to enter.



PERMITS:

- Names of emergency responders and instructions for contacting
- Communication procedures used by entrants and attendants.
- A list of all equipment necessary to ensure entrants' safety.
- A description of any other permits that entrants need to work in the space.



Training

- Duties of the Entrant
- Duties of the Attendee
- Duty of the Entry Supervisor



Duties of the Entrant

- Know space hazards, including information on the mode of exposure (e.g., inhalation or dermal absorption), signs or symptoms, and consequences of the exposure
- Use appropriate personal protective equipment properly (e.g., face and eye protection, and other forms of barrier protection such as gloves, and coveralls)



Duties of the Entrant:

- As necessary, maintain communication (i.e., telephone, radio, visual observation) with attendants to enable the attendant to monitor the entrant's status as well as to alert the entrant to evacuate



Duties of the Entrant

- Exit from permit space as soon as possible when ordered by an authorized person, when the entrant recognizes the warning signs or symptoms of exposure exist, when a prohibited condition exists, or when an automatic alarm is activated
- Alert the attendant when a prohibited condition exists or when warning signs or symptoms of exposure exist



Duties of the Attendee

- Remain outside permit space during entry operations unless relieved by another authorized attendant
- Perform non-entry rescues when specified by employer's rescue procedure
- Know existing and potential hazards, including information on the mode of exposure, signs or symptoms, consequences of the exposure, and their physiological effects



Duties of the Attendee:

- Maintain communication with and keep an accurate account of those workers entering the permit-required space
- Order evacuation of the permit space when a prohibited condition exists, when a worker shows signs of physiological effects of hazard exposure, when an emergency outside the confined space exists, and when the attendant cannot effectively and safely perform required duties



Duties of the Attendee:

- Summon rescue and other services during an emergency;
- Ensure that unauthorized persons stay away from permit spaces or exit immediately if they have entered the permit space
- Inform authorized entrants and entry supervisor of entry by unauthorized persons
- Perform no other duties that interfere with the attendant's primary duties.



Duties of the Supervisor

- Know space hazards including information on the mode of exposure, signs or symptoms, and consequences of exposure
- Verify emergency plans and specified entry conditions such as permits, tests, procedures, and equipment before allowing entry
- Terminate entry and cancel permits when entry operations are completed or if a new condition exists



Duties of the Supervisor

- Verify that rescue services are available and that the means for summoning them are operable
- Take appropriate measures to remove unauthorized entrants
- Ensure that entry operations remain consistent with the entry permit and that acceptable entry conditions are maintained.



Closing

- Definition
- Equipment
- Hazards
- Permits
- Training



Questions

